



## **Responsiveness Summary**

### **Agreed Order Amendment, State Environmental Policy Act (SEPA) and Determination of Non-Significance (DNS) to Address Infrastructure for a Contingent Groundwater Treatment System**

**Landsburg Mine Site – Ravensdale, Washington**

**June 2006**

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## Introduction

This document summarizes and responds to public comments received on the proposed Agreed Order Amendment, State Environmental Policy Act (SEPA) Checklist and Determination of Non-Significance for the Landsburg Mine Site located in Ravensdale Washington. The Agreed Order Amendment is a second amendment to the existing 1993 Agreed Order. This Responsiveness Summary is not a summary for a Cleanup Action Plan (CAP) for this site. The Cleanup Action Plan will be the next activity in the cleanup process.

The Washington State Department of Ecology (Ecology) invited the public to comment on the amendment that will require the potentially liable parties (PLPs) to design and build infrastructure components for a contingent groundwater treatment system for the Landsburg Mine site.

Ecology made available the following documents for public review and comments:

- Agreed Order Amendment.
- State Environmental Policy Act (SEPA) Checklist.
- Determination of Non-Significance (DNS)
- Scope of Work Letter

The initial comment period ran from October 20 through November 18, 2005. This comment period was extended through February 15, 2006 in response to requests from members of the public to hold a public meeting.

Ecology held a public meeting at the Tahoma Junior High School on February 7, 2006 to provide information and take comments. Over 35 people attended this meeting. The public meeting included an open question and answer session. The question and answer session was designed to provide immediate responses to the public's questions and concerns. The oral comments are written largely verbatim in this document. Transcribed notes of questions and answers during that public meeting are included in this Responsiveness Summary. (**See Comment 8 below**). Ecology received eight written comment letters from individuals and interested parties by the February 15, 2006 deadline. An additional comment was accepted even though it was sent after the deadline.

Ecology appreciates the input and the time and effort of those who submitted comments. Each comment letter was reviewed and significant comments within each submission were identified. In this document, the written comments are quoted directly and are presented in bold. Each comment letter is divided into sections in order to adequately address significant issues raised in each of the sections. Ecology's response, presented in regular type, follows each comment.

**Appendix B** contains the original comment letters in their entirety

## **Summary of Proposed Interim Action**

### **Agreed Order Amendment to Address Contingent Groundwater Treatment System**

The Agreed Order Amendment requires the potentially liable parties (PLPs) to design and build infrastructure components needed to pump out, pre-treat and pipe contaminated water to King County sanitary sewer system in case contamination is detected above state cleanup levels. The project includes a concrete pad for the pump house, an electrical connection with transformer and fence, an access gravel drive, parking area and an underground effluent discharge line to the county sewer system. They will also obtain permits or their substantive requirements for the Model Toxic Control Act (MTCA)-exempted permits for the work to be done. A safe and reliable means is needed to dispose of pretreated groundwater if necessary.

In September 2004, the potentially liable parties completed phase one of the project, which identified the structural elements needed to support the contingent groundwater treatment system.

Several discharge alternatives were evaluated. The preferred alternative is on-site pretreatment and discharge to an existing county-owned sewer system to the north of the site. This connection and discharge to the sewer system is not linked to any form of commercial or residential land development.

The second phase of this project is to design the infrastructure components, and obtain the necessary approvals for the construction work. These components will be needed if the groundwater treatment system becomes necessary during the cleanup.

The third phase of the project will be the actual construction and installation. This will prevent undue delays if contamination is detected and the groundwater treatment system is needed.

## **Summary of Public Involvement Actions**

Public Involvement activities related to this public comment period included:

- Distribution of a fact sheet describing the site and the interim action activities through a mailing to approximately 600 people, including the Ravensdale community and other interested parties.
- Publication of paid display ads in *King County Journal* on October 20, 2005 and February 2, 2006.
- Dissemination of Press releases announcing the proposed plan, comment period and public meeting. These press releases were sent to newspapers and broadcasters in King County, Kent/Renton/Auburn reporters, Voice of the Valley, Puget Sound Business Journal, King 5 television, and to subscribers who receive all of the department's news releases.
- Publication of notice in the Washington State Site Register on October 20, November 3, November 17, 2005; and February 9, 2006.

- Posting of the documents on the Washington State Department of Ecology (Ecology) web site:  
[http://www.ecy.wa.gov/programs/tcp/sites/landsburg\\_mine/landsburg\\_mine\\_hp.html](http://www.ecy.wa.gov/programs/tcp/sites/landsburg_mine/landsburg_mine_hp.html)
- Distribution of bulletin board fliers in the Ravensdale community before the public meeting.
- Providing copies of the above documents through information repositories at Ecology and at the Maple Valley Library.
- Informal meetings with community stakeholders, King County, Public Health Seattle and King County, and Department of Development and Environmental Services.

## **Key Community Concerns Identified**

The main concerns expressed during the public comment period and public meeting generally focused on the following:

- Safety issues.
- Water withdrawal and its effects on private wells.
- Potential of land development and impacts.
- Protection of Clark's Spring watershed.
- Capacity of the sewer line.
- Compensation for the use of the sewer line.
- Ecological (wildlife) concerns.
- Proposed location of the line.
- The preferred alternative and community impacts.
- Public participation process.

## **Summary of Revision to the Documents**

Based on comments from the public, Ecology is working with the PLPs to revise the pipeline proposal. These revisions include:

- Modifying the proposed route of discharge line: At present, a route going under or alongside the Summit Landsburg road rather than its original route through Palmer Coking Coal property and easements may be implemented.
- Installing, but not physically connecting, the four-inch effluent pipeline. If monitoring at the site indicates that there is contamination above state cleanup levels, the contingency plan will be implemented and the effluent pipeline will be connected when needed.

Ecology issued a revised SEPA Determination of Nonsignificance (DNS) to recognize these changes. These revisions do not alter the nature of this interim action and are therefore not substantive enough to require an additional 30-day public comment period. Most of the comments received from the public are pertinent to this proposed interim action and have been addressed. Ecology and the PLPs will discuss compensation and capacity issues with the concerned parties and will work with King County in meeting the substantive requirements for the infrastructure proposal and its implementation.

## **Site Background**

The Landsburg Mine site is a former underground coal mine located approximately 1.5 miles northwest of Ravensdale in southeast King County. The site is located directly south of the S.E. Summit-Landsburg Road and north of S.E Kent-Kangley Road.

The Cedar River is approximately 500 feet north of the site. The mine site occupies property currently owned by Palmer Coking Coal Company and formerly by the Plum Creek Timber Company, L.P. Coal mining began along the Landsburg coal seam in the 1930s. In 1959, when the Landsburg seam was exhausted, mining shifted to the Rogers seam and continued there until 1975.

Underground mining methods were used to extract the coal from the Rogers seam. These methods resulted in the ground surface above the abandoned mine sinking down and forming a subsidence trench. This trench is roughly three-quarters of a mile long, 20- to 60- feet deep, and 60- to 100- feet wide.

During the late 1960s and early 1970s, the northern part of the trench was used as a disposal site for a variety of industrial wastes. The wastes either were contained in drums or were drained from tanker trucks. Records indicate that about 4,500 drums and 200,000 gallons of oily waste water and sludge were disposed of in this portion of the trench. A portion of the waste may have been burned during fires in the early 1970s.

Samples taken from recovered drums indicate that this material consisted of a wide range of organic and inorganic industrial waste, including paint waste, polychlorinated biphenyls (PCBs), cyanide, metals, and oily sludge. Disposal of land-clearing debris and construction debris in the trench continued until the early 1980s.

In late 1991, at Ecology's request, four of the potentially liable parties (PLPs) removed the most accessible drums from the trench and constructed a fence to restrict access to the site. Following removal of the drums, Ecology and the PLPs began negotiations for a Remedial Investigation and Feasibility Study. The results of this study were the subject of public review and comment in March 1996.

## **Overview of Groundwater Sampling Results**

In 1996, the Report of Investigation and Feasibility Study (RI/FS) established that the main risk from this site is through the groundwater pathway. As part of this study, extensive sampling of 14 private wells, seven monitoring wells installed in close proximity to the mine site, and water flowing from the two mine portals (the now collapsed north and south entrances to the mine) was also conducted in 1996.

The well water and surface flows were analyzed for a wide variety of pollutants including metals, organic compounds, pesticides, and inorganic compounds. The results of the testing indicated that the wastes disposed of in the mine were not affecting groundwater. Additional rounds of sampling of monitoring wells at the site were conducted to check for contaminants in May 2000 and October 2003. These results and recent sampling results in 2004 to 2006 indicate that no impacts to groundwater exist that can be attributed to the wastes disposed at the site.

## Comments Received and Ecology Responses

### Comment 1: City of Kent

*Key Concerns: Protection of Clark's Spring Watershed*

**1.1 The City of Kent understands that the project is specifically listed for the remedial action. As such, comments within the SEPA checklist should be limited to that action. There are several inaccurate statements regarding the City of Kent water supply and it is the opinion of the City of Kent that statements regarding specifics of the City's operations are not applicable to the proposed remediation infrastructure. More appropriate language would identify the location of the Clark Springs Water Supply, and would include: some discussion of how the hydrology of the area is connected to the water supply, and the fact that this source provides up to 65% of the City's municipal water depending on the time of year, and a brief discussion of how the contamination could impact the City's water supply. The City respectfully requests other statements be removed as they are inaccurate, and the City has, and will continue to operate pursuant to water rights.**

#### *Ecology's Response:*

Ecology believes that sufficient descriptive information on area hydrology has been incorporated in the context of the SEPA proposal and its attachments. Hydrological background for the site including the City's municipal water supply can be found on Pages 10 – 12 of the SEPA proposal. Further information may be available from the 1996 Remedial Investigation/ Feasibility study (RI/FS) on receptors and the main risk from the site via the groundwater pathway.

**1.2 Kent's main concern with this project relates to the lack of any proposed remedial infrastructure at the southern end of the mine.**

#### *Ecology's Response:*

The current proposal is for a viable means to dispose of pretreated water from the entire site, if necessary. The proposal for the infrastructure for the Contingent Treatment System at the north portal is for disposal of pretreated water. The system will be available to contain and pretreat contaminated water if detected at the south portal wells. The south portal wells continue to be a point of compliance and will continue to be monitored. If contaminated groundwater is detected at the south portal, it will be prevented from further migrating offsite. The water will be pumped out, contained and treated before disposal.

Any pumped-out contaminated groundwater from the south portal area could be initially stored in Baker tanks for transport by tanker trucks to the north portal treatment and disposal infrastructure. Another possibility is to construct a pipe running over the hill slopes of the site to the north portal infrastructure pad. Another option is increased

pumping at the north portal wells to the water level in the mine and bring hydraulic gradients down to a level that flows away from the southern portal area. In any case, capture and containment of water will have occurred. Installation at the north portal remains a higher priority location that will protect both the north and south ends of the site.

The present proposal ties in the pipeline conveyance to a pre-existing connection to the north. There are no zoning parcels, wetlands, or utilities that would prevent expedient construction of the pipeline at the northern end of the site. However, the southern portion of the site contains more 401 wetland areas, and passes through the Clark Springs water supply.

Finally, it is important to state that there is still no consent decree and cleanup action plan, which could formalize such contingency actions for the site, including the south portal. Therefore, it would be in everyone's interest to proceed with finalizing the Draft Cleanup Action Plan and refining it, in order to formalize a contingency plan and address these concerns in the remedial action itself.

**1.3 In addition to the City's concern of the lack of infrastructure at the southern end of the mine, the City has the following comments to the SEPA Environmental Checklist for the MTCA Landsburg Mine Site; Installation of Infrastructure Components of the Contingent Groundwater Treatment System Project, Ravensdale, Washington:**

**Cover Sheet -description of location of proposal State route SR516 ends at SR 169 (Maple Valley Hwy) East of SR169, the road is Kent Kangley Road.**

***Ecology's Response:***

Ecology will remove “(State Highway 516)” from the sentence in the revised Determination of Nonsignificance (DNS). The correction has been included in an Errata Sheet attached to the revised DNS.

**1.4 The project description should include some conceptual treatment options for various types of contaminants potentially present within the mine.**

***Ecology's Response:***

The second amendment to the Agreed Order and the SEPA checklist is only for the physical infrastructure to dispose of treated groundwater. It does not detail treatment technologies and engineering design for treatment. At this stage, it would be difficult to describe the treatment options because the PLPs do not know what contamination could be found leaving the site.

However, when the draft Cleanup Action Plan (dCAP) is finalized, a more detailed description of potential treatment options will be provided under a Contingency Plan in the draft Cleanup Action Plan and in the Engineering Design Report.

**1.5 Should there be secondary containment around the facility in the event of a mechanical malfunction of the treatment system?**

***Ecology's Response:***

Ecology will direct the PLPs to evaluate secondary containment options for the proposal, including the pipeline or mechanisms for detecting potential leaks in the pipeline. Secondary containment for the treatment facility is not part of this proposal, but will be considered when a treatment facility is required. Ecology can include secondary containment with the treatment designs and institute containment or cleanup protocols in the possible event of a mechanical malfunction or physical breaks in the system when the cleanup action plan is finalized and the Contingency Plan is completed.

**1.6 Page 2 The City suggests adding the word "illegal" to the first sentence so it reads as follows: "A portion of the trench was used in the late 1960's to the late 1970's for the illegal disposal of various industrial wastes..."**

***Ecology's Response:***

Ecology does not have enough information or analysis available to alter descriptive language for this proposal into language that may have implications on liabilities and legal issues. This is particularly the case when considering such factors as:

- The Model Toxics Control Act (MTCA) becoming state law much later in 1989.
- The length of elapsed time since the disposal.
- The nature of administrative options for cleanup under MTCA.

It is not necessary to characterize the nature of the disposal for SEPA purposes nor is Ecology required to analyze the legality of prior actions for purposes of MTCA.

**1.7 Page 3 item 6 -Proposed timing or schedule. The word "changed" in the third sentence implies that the groundwater quality has been clean. No deep well investigation has previously been conducted to determine the quality of the groundwater deep within the mine. If this statement is true as written, how can something change when comparable data does not exist?**

***Ecology's Response:***

The reference to groundwater quality "change" refers to results from the site wells at the point of compliance and not the deep well or groundwater within the mine interior. The deep well (LMW-11) will be used to analyze the quality of groundwater within the former mine and evaluate risk toward the south end from deep contamination in the mine if it existed.

The analytical results of the groundwater sampled from LMW-11 in February 2006 did not indicate any impacts exist that could be attributed to wastes disposed at the mine.

The 1996 Remedial Investigation/Feasibility Study (RI/FS) determined that a more invasive characterization of the disposed wastes in the trench is impractical, and that the primary mode of potential chemical migration from the mine is through the groundwater pathway. Thus, the remedy at the site will conservatively assume that there is waste in the trench and mine workings. The remedy will require groundwater monitoring along the primary groundwater flow paths from the Rogers coal seam.

To date, no contamination has been detected emanating from the site via groundwater, which is the main risk pathway from the former mine. However, it may be possible to have a scenario where a contaminant plume begins to migrate out of the mine, for example, due to an earthquake that ruptures drums of waste dumped in the mine. If such a plume were to flow through groundwater emanating from the site, it will be detected in the site wells. Therefore, this is in accord with the original approach to monitor the outlets of the system to ensure no receptors are impacted.

**1.8 Page 5 item 11 - 3<sup>rd</sup> sentence states that contamination was confined within the existing mine. What information does DOE and the PLP have to confirm contaminants have not migrated outside of the mine? Can this be confirmed? If so, it should be stated with an explanation where the contamination is located including a discussion of how that was determined.**

***Ecology's Response:***

Results from the following studies have shown no groundwater contamination outside of the site that is attributable to the waste disposed in the trench:

- Department of Health study in 1990.
- Private well and site well groundwater sampling for the Report of Investigation and Feasibility Study from 1993 to 1996.
- Interim groundwater sampling results in 2000, and 2003 to 2006.

Soil sampling in the northern trench and at the portal areas established that soil contamination was limited only to the disposal areas within the northern subsidence trench. The 1996 RI/FS investigation showed that the source of contamination was in various barrels of industrial waste, and disposal of oily wastewater at the northern portion of the trench.

The main risk was determined to be the groundwater pathway, from the trench wastes to the groundwater in the interior of the former coal seam mine, and out through the primary groundwater pathway at the north and south mine portals. The monitoring wells at Landsburg Mine have been situated at the most representative pathways along the ends of the mine that will intercept water coming from the former mine interior beneath the trench wastes.

- 1.9 Page 6 item 11 -It is mentioned a couple of times that "if groundwater capture and treatment becomes necessary in the future, the treatment system will be specific to the contamination and should be available in a relatively short time." What does a "relatively short time" mean? If contamination is discovered in the southern portal and it seeps to the aquifer where the City holds its water rights for the Clark Spring supply, any time that contamination is entering the aquifer is unacceptable and will cause an emergency situation with the City's water supply.**

***Ecology's Response:***

Ecology agrees that any contamination entering the aquifer above cleanup levels at the points of compliance is unacceptable and must be prevented. Ecology believes that the infrastructure proposal will prevent this scenario from happening by removing permitting delays to have the Contingent Groundwater Treatment System ready if it is needed.

The expected travel time for contaminant transport is an important technical concern. Ecology and the City of Kent are reviewing a travel time memo to assess this risk, and to establish an appropriate frequency of monitoring following the proposed fill in and capping of the trench wastes (preferred remedial alternative).

The PLP group is monitoring groundwater at concentrations for most hazardous substances well below levels of concern. Most groundwater plumes start emanating at a point of compliance initially at very low concentrations and increase with time. Obviously, it is in the interest of all concerned that groundwater capture and treatment is initiated at the appropriate time, and the sequestered groundwater is treated and disposed of safely in a timely manner.

Therefore, if hazardous constituents start emanating from the mine and show an increasing trend, the treatment system design and preparation can be triggered to the specific types of contamination observed before the contamination reaches an unacceptable level.

Although an exact time frame for installing a treatment system cannot be presented now, treatment systems can be installed in a relatively short period (potentially three to four months or less). This is because most systems today are off the shelf modules. A treatment system would be installed on private land and would only require compliance with the substantive requirements of King County building codes. Due to administrative procedures, it is likely to take more time to get approvals than to install the treatment system.

Ecology intends to establish a Cleanup Action Plan, which will select appropriate groundwater cleanup levels at appropriate points of compliance that are consistent with the Model Toxics Control Act.

- 1.10 Page 6 item 11 -Furthermore, infrastructure is not proposed to be constructed at the southern end of the mine to capture water. Installation of such infrastructure after-the- fact will cause further delay and further contaminate Kent's water supply. As a result of the recent natural disasters in New Orleans and Florida, the City has been informed by some suppliers that standard construction materials such as pipe are already becoming more difficult to obtain. This provides additional justification that a total remedial infrastructure package should be constructed at both ends of the mine. his could include capturing contaminated water at the southern end of the mine and tight- lining to the proposed facility on the northern side of the mine.**

***Ecology's Response:***

Please see response to 1.2 above.

- 1. 11 Page 6 item 11 - How will waste from the treatment facility be stored and disposed of**

***Ecology's Response:***

If any wastes are generated in the Treatment System in the course of pre-treatment, they will be properly disposed of according to the classification of the wastes. If dangerous wastes are generated, they will also be disposed of in accordance with dangerous waste regulations. (See WAC 173-303).

- 1.12 Page 6 item 12 - Location of the proposal same comment above for the SR 5 16 notation It should just be Kent Kangley Road.**

***Ecology's Response:***

See response to 1.3 above.

- 1.13 Page 9 item F. This section says the length of pipe on Palmer Coke and Coal property is 4,200 feet while other sections state 5,200 feet.**

***Ecology's Response:***

Ecology will correct the appropriate sections to state the correct length of pipe to 5,200 feet.

- 1.14 Page 10 item 3a - Though the answer to the question is technically correct, the southern end of the mine discharges water to an unconfined aquifer with high transmissivity and is near the location where Rock Creek begins perennial flow. One can assume that if contamination surfaces at the southern end of the mine, it would easily reach Rock Creek through the shallow unconfined aquifer. This should be discussed.**

***Ecology's Response:***

This particular section refers only to surface water flows. Discharges from the southern end of the mine into high transmissive surficial aquifers and into Rock Creek as referred to in the comment are captured on page 12 "Site Drainage Features" and in Figure 7 in the SEPA checklist. Further discussion can be referenced in the south portal hydrogeologic investigation or in the 1996 RI/FS.

- 1. 15 Page 11 last paragraph. While the City moved the natural location of Rock Creek within the Clark Springs property, the City did not divert flows. The City has and will continue to operate this facility in compliance with State approved water rights Dates and flow amounts within the response are incorrect, however this does illustrate that the City of Kent has maintained a municipal water supply to provide for public health and safety for the citizens of Kent. The City continues to rely heavily on Clark Springs to meet municipal water supply needs**

***Ecology's Response:***

The Hart Crowser report, "The Hydrogeology of Rock Creek, Kent, Washington" dated May 1, 2003 and prepared as part of the City of Kent's Biological Assessment (BA) of Clark Springs Water Supply System lists the Rock Creek Surface Water Diversion – Certificate No. 7232-A on page 48. This is one of several other water rights at Clark Springs. The water right would authorize the City to divert water from Rock Creek per the terms of the certificate.

- 1.16 Page 11 -Rock Creek - The first paragraph, second sentence discusses the creek becoming ephemeral when it crosses under Kent Kangley. This is actually a tributary to Rock Creek commonly known as Georgetown Creek. Though perennial flow of Rock Creek begins in this general area, the Rock Creek channel actually flows from the south east, and does not cross Kent Kangley Road in this area.**

***Ecology's Response:***

Ecology appreciates the correction to local stream nomenclature in the area and will be mindful of the name and the nature of Georgetown Creek in future references.

- 1.17 Page 12 -Site Drainage Features - The first paragraph states that the mine has "only ephemeral drainages which discharge during prolonged or intense periods of rainfall" This statement is incorrect. The City of Kent, the DOE and the PLP group have had discussions and came to the understanding that the southern portal (Portal #3) had continual discharge at the southern end of the mine. This was determined in late summer 2003. Furthermore, the fourth paragraph on page 12 discusses the minimum flow occurring in late Summer**

**with an estimated flow of 2 cfs. This paragraph contradicts the first statement (noted above) as this is not an ephemeral drainage.**

***Ecology's Response:***

The 2003 south portal hydrogeologic study only determined that water table in the mine had a measured gradient towards the south as well as the north at the time of measurement. The south portal #3 appears to have a continual discharge from the mine, but flow from the discharge is variable.

- 1.18 The hydrologic discussion should state that when water from the southern portal infiltrates, it is seeping into the unconfined outwash aquifer, the same aquifer where the City of Kent holds water rights for the Clark Springs water source.**

***Ecology's Response:***

Ecology believes the description on page 12 of the SEPA checklist captures the necessary elements for site drainage features, including further drainage toward Rock Creek. Specific mention of the watershed surface aquifer and downstream sinks including Clark Springs is captured on page 11 of the SEPA checklist.

- 1.19 Page 15 items 5a and 5b -The site is located approximately 500 feet from the Cedar River, a river which provides habitat to Chinook salmon, a species listed as threatened by the federal government. This should be mentioned in the response.**

***Ecology's Response:***

These points are mentioned in page 10 and on page 15 of the SEPA checklist.

- 1.20 The Clark Springs property should be identified on Figure 2.**

***Ecology's Response:***

There is no justification provided for this request. Figure 2 of the SEPA checklist is an area map showing locations of population centers and topography, not public facilities. The location of the Clark Springs property has no bearing on the proposal to install infrastructure at the north portal area of Landsburg Mine.

- 1.21 Figure 2 is inaccurate in that it shows the old alignment of Summit Landsburg Road. The old road used to connect directly to 4 corners. The road connection was moved to the east and now it connects with Kent Kangley Road.**

***Ecology's Response:***

The maps used in the SEPA checklist were apparently obtained from the USGS Cumberland and Hobart 7.5 topographic quadrangles. The Cumberland topographic map was made in 1953, photo revised in 1968 and 1973. Ecology is unaware of any updated USGS quadrangle maps that incorporate the road connection change. Ecology will be grateful for updated thematic maps of the area if available and will instruct the PLPs to incorporate them in future references. Maps for this site containing this revision will be incorporated in the future when made available for public distribution.

**1.22 Clark Springs should be shown and labeled on Figure 7.**

***Ecology's Response:***

Ecology will instruct the PLPs to incorporate this correction in future documents. This has also been cited in the Errata Sheet for the SEPA checklist.

**1.23 Figures 7 and 8 both have SR 516 shown and it is Kent Kangley Road. Further, as stated in 11 above, the alignment of Summit Landsburg road is wrong in both figures.**

***Ecology's Response:***

See Ecology's response to Comment 1.3 and 1.21 above.

**1.24 As previously stated by the City of Kent, any contamination to the Clark Springs Water Supply will have a significant detrimental impact to the City. Kent strongly recommends the Department of Ecology and the Landsburg Mine PLP Group install infrastructure at the southern portal that will immediately capture contaminated mine water if detected during sampling. This should be tight-lined to the proposed treatment facility prior to discharge to the sanitary sewer.**

***Ecology's Response:***

See Ecology's response to Comment 1.2 above.

## **Comment 2: Tahoma School District No. 409**

*Key Concerns: Safety, Capacity, and Compensation*

- 2.1 This letter is in response to the proposed groundwater cleanup at the Landsburg Mine Site in Ravensdale, WA. It is our understanding that one of the proposed cleanup options would be to dispose of contaminated groundwater via connection to a sewer "tight line" that serves Tahoma Junior High School, 25600 Summit-Landsburg Road SE, Ravensdale. The Tahoma School Board has discussed this proposed cleanup option and we have questions and concerns about its possible impact.**

**The sewer line is designed to serve Tahoma Junior High School and a future school on an adjacent, 38-acre site. The line was not designed for usage beyond the schools' needs.**

### ***Ecology's Response:***

Ecology will meet with school officials and King County Department of Development and Environmental Services (DDES) to get more information with regard to capacity. The PLP, with review by Ecology, will investigate further the feasibility of the connection with this concern in mind.

- 2.2 While the school board is pleased that discussion is taking place regarding cleanup of the mine site, the board is opposed to any use of the sewer line that would potentially limit or otherwise affect construction of a school on the 38-acre site.**

### ***Ecology's Response:***

Ecology and the PLP Group understand the School Board's concern about the possible effect of this line for future growth. It is not the intention of Ecology or the PLPs for the proposed hookup to have negative effects to planned future capacity of the School District's sewer line. The PLPs will seek more information from King County Department of Development and Environmental Services (DDES) and the Soos Creek Sewer District to determine whether the proposed connection of the 4-inch line will affect future capacity for the school.

The PLPs will seek more information to fully understand details of possible plans for the line, background information, owner or user rights, fees, and related issues in order to seek adequate and acceptable resolution to this concern. The proposed 4-inch pipeline is not a sewer connection due to its small diameter pipe. This makes it unsuitable for developmental purposes and is against its original design parameters and purpose. The original design parameters and purpose is to convey pretreated groundwater from Landsburg Mine site if groundwater is detected above state cleanup levels.

**2.3 A companion issue is whether the school district would receive compensation for use of the line, which was paid for by the district.**

***Ecology's Response:***

The PLPs, under Ecology's review, are investigating the issue of compensation for the proposal.

**2.4 Finally, the school board is concerned about the risks of sending toxic effluent through the line that serves more than 1,000 students and staff**

***Ecology's Response:***

The pretreatment process will significantly remove or reduce the concentrations of contaminants before disposing to the discharge line. The pre-treated water will be conveyed through a pipeline into the sewer or publicly owned treatment works (POTW), for secondary and tertiary treatment. It will be pretreated to discharge levels that will follow the substantial requirements of the POTW for conveyance into their sewer treatment system.

Since we do not know what contaminants might be detected due to the fact that no contamination has been found at this site, it is sufficient at this point to say that pretreatment will be to or below acceptable discharge limitations for safe discharge to a POTW. The water quality or concentrations of various contaminants of concern must be reduced to low enough levels for the POTW to effectively apply their own secondary and tertiary treatment; otherwise, it would be expected to provide a strain to such facilities.

Ecology will require the PLPs to ensure that back flow prevention of their discharge water to the school is included in the design for connection to the existing Soos Creek Water and Sewer District's sanitary sewer line.

At present, there is a greater risk at this site due to lack of such infrastructure (treatment pad, access road, and discharge pipeline connection) needed under a contingency plan to address the possibility that contaminated water is detected at the site above cleanup levels at its points of compliance.